

**APPLICATION FOR A DECISION REGARDING THE STATUS OF THE  
GENERIC NAME "PAGURUS" FABRICIUS, 1775 (CLASS CRUSTACEA,  
ORDER DECAPODA) AND APPLICATION FOR THE USE OF THE  
PLENARY POWERS IN REGARD THERETO IN CERTAIN  
CIRCUMSTANCES**

by

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**Part I (by J. Forest and L. B. Holthuis)**

The form in which this proposal is presented is rather unusual, since it is submitted by two applicants, who advocate different solutions for the problem discussed in it. This is the reason why the present paper is divided in three parts. In the first part, submitted jointly by the two authors, the nomenclatorial status of the generic name *Pagurus* Fabricius, 1775, and the problem connected with it, are discussed. The second part is written by the first author (Forest) and gives his views on this problem and his proposals for its solution. The third part, finally, contains the viewpoint of the second author (Holthuis) and the proposals submitted by him. It is the hope of the applicants that the Commission, after due consideration of the two viewpoints, legalize one of them by accepting the proposals of the author supporting it. The problem, now, is the following :

2. The generic name *Pagurus* Fabricius, 1775, is used by all carcinologists and is the best known of the names given to the genera of hermit crabs ; it is the name of the type genus of the subfamily PAGURINAE, of the family PAGURIDAE,

and of the section PAGURIDEA ; the latter containing all species of hermit crabs that are known at present. It is, therefore, the more regrettable that no uniformity exists among carcinologists in the use of this name : it being currently applied by different carcinologists to two widely different genera. The object of the present application is to bring this question before the International Commission on Zoological Nomenclature in order to end the highly undesirable state of confusion that exists at present in the literature dealing with this group of Crustacea.

3. The following are the original references to the generic names dealt with in the present application :—

*Bernhardus* Dana, 1851 (November-December), *Proc. Acad. nat. Sci. Philad.* 5(11) : 267 (gender : masculine) (type species, by original designation : *Cancer bernhardus* Linnaeus, 1758, *Syst. Nat.* (ed. 10) 1 : 631).

*Dardanus* Paulson, 1875, *Issljed. Rakoobr. Krasn. Morja* (Stud. Crust. Red Sea) : 90 (gender : masculine) (type species, by monotypy : *Dardanus hellerii* Paulson, 1875, *Issljed. Rakoobr. Krasn. Morja* (Stud. Crust. Red Sea) : 90 (which is a junior subjective synonym of *Pagurus sanguinolentus* Quoy & Gaimard, 1825, Freycinet's *Voy. autour Monde Uranie & Physicienne* (Zool.) : 532).

*Diogenes* Dana, 1851, *Proc. Acad. nat. Sci. Philad.* 5(11) : 268 (gender : masculine) (type species, by selection by Dana, 1852 (*Amer. J. Sci. Arts* (2) 13 (37) : 122) : *Pagurus miles* Fabricius, 1787, *Mant. Ins.* 1 : 327).

*Eupagurus* Brandt, 1851 (September 30), Middendorff's *Reise N. u. O. Sibiriens* 2 (Zool. 1) : 105 (gender : masculine) (type species, by selection by Stimpson, 1858 (*Proc. Acad. nat. Sci. Philad.* 1858 : 74) : *Cancer bernhardus* Linnaeus, 1758, *Syst. Nat.* (ed. 10) 1 : 631).

*Pagurus* Fabricius, 1775, *Syst. Ent.* : 410 (gender : masculine) (type species, by selection by Latreille, 1810 (*Consid. gén. Anim. Crust. Arachn. Ins.* : 422) : *Cancer bernhardus* Linnaeus, 1758, *Syst. Nat.* (ed. 10) 1 : 631).

*Pagurus* Berthold, 1827, in Latreille, *Nat. Fam. Thierr.* : 255 (a *nomen nudum*).

4. Like in so many controversies concerning carcinological nomenclature the origin of all the trouble lies in the fact that the carcinologists are divided into two groups, each of which considers a different species as the type species of the genus concerned. In the present case, one of these two groups, which we for reasons of convenience will name "Group I", is of the opinion that *Cancer bernhardus* Linnaeus, 1758, is the type species of the genus *Pagurus* Fabricius, 1775, while "Group II" indicates as the type species of that genus *Pagurus punctulatus* Olivier (1811, *Encycl. méthod. Hist. nat.* 8 : 641) (= *Cancer megistos* Herbst, 1804, *Vers. Naturgesch. Krabben Krebse* 3(4) : 23). There can be little doubt that Group I is right. *Cancer bernhardus* is the second of the thirteen species originally included by Fabricius (1775) in his new genus *Pagurus*, and it was selected as the type of that genus by Latreille (1810). *Pagurus punctulatus*, on the other hand, does not figure among the species originally included in the genus *Pagurus*, while furthermore not a single one of the species placed by Fabricius (1775) in that genus, at present is considered to be congeneric with *Pagurus punctulatus* Olivier. Dana's (1852, *Proc. Acad. nat. Sci. Philad.* 6 (1) : 6) selection of *Pagurus punctulatus* Olivier as the type species of the genus *Pagurus* thus is invalid for two reasons. First, Dana's type selection is not the first, it having been made 42 years after Latreille's (1810) selection, and, second, the species selected by Dana is not one of the species originally included in the genus.

5. Dana was followed in this error by the majority of carcinologists till 1896, when Benedict (*Ann. Mag. nat. Hist.* (6) 18 : 99, footnote) pointed out that *Cancer bernhardus* Linnaeus, actually is the type species of the genus *Pagurus*. Since that time a large number of authors has followed Benedict, but a considerable number continued to use the incorrect nomenclature.

6. To make matters even worse, the two genera discussed here, are the type genera of the two subfamilies that together form the family PAGURIDAE. Authors belonging to Group I use the names PAGURINAE and DARDANINAE (or PAGURISTINAE or DIOGENINAE) to indicate these subfamilies, while those of Group II employ the names EUPAGURINAE and PAGURINAE respectively. It will be obvious to anyone that this state of affairs in which different authors use each of the names *Pagurus* and PAGURINAE for two widely different taxa is intolerable, and it is hoped that a decision by the International Commission on Zoological Nomenclature will bring this confusion to an end

7. There are three possible solutions to this problem. In the following table the names for the two genera (indicated as Genus A and Genus B respectively), which under each of these solutions (indicated as Solutions I, II, and III respectively) would be the legal names, are indicated, together with the names of their respective type species :—

	Solution I	Solution II	Solution III
Genus A	<i>Pagurus</i> Fabricius, 1775 Type species : <i>Cancer bernhardus</i> Linnaeus, 1758.	<i>Eupagurus</i> Brandt, 1851 Type species : <i>Cancer bernhardus</i> Linnaeus, 1758.	<i>Eupagurus</i> Brandt, 1851 Type species : <i>Cancer bernhardus</i> Linnaeus, 1758.
Genus B	<i>Dardanus</i> Paulson, 1875 Type species : <i>Dardanus hellerii</i> Paulson, 1875.	<i>Pagurus</i> Fabricius, 1775 Type species : <i>Pagurus punctula-</i> <i>tus</i> Olivier, 1811.	<i>Dardanus</i> Paulson, 1875 Type species : <i>Dardanus hellerii</i> Paulson, 1875.

8. Solution I is attained by a strict application of the International Rules of Zoological Nomenclature. The use of the Plenary Powers is not involved under this solution. The support for this solution comes from the members of Group I, who already are employing the names which under this Solution are correct. Group I includes all American and Soviet carcinologists (with the exception of the American author Lee Boone). The names *Pagurus* and *Dardanus* are being used for the genera A and B respectively in both the scientific and non-scientific literature of the American countries and the U.S.S.R. These names also are used by the Hawaiian and Australian carcinologists. Furthermore these names are used by a few zoologists in western Europe : the Spanish carcinologist Dr. R. Zariquiey Alvarez and two Dutch workers in the group (the late Miss Alida M. Buitendijk, who worked extensively on Indo-West Pacific PAGURIDAE, and the second author of the present proposal).

9. Solution II is the one supported by the group of authors indicated here as Group II. To attain this solution the Plenary Powers of the Commission have to be used to designate *Pagurus punctulatus* Olivier, 1811, as the type species of the genus *Pagurus* Fabricius, at the same time suppressing all previous type selections for that genus. Group II includes practically all French, British, German, and Scandinavian carcinologists. Also the

carcinologists from South Africa, India, Japan, and New Zealand belong here. In the non-scientific literature of Western Europe the names *Eupagurus* and *Pagurus* are commonly used for genus A and B respectively.

10. Solution III can be attained by the suppression of the ambiguous generic name *Pagurus* Fabricius under the Plenary Powers of the International Commission on Zoological Nomenclature, by which action the generic names *Eupagurus* Brandt and *Dardanus* Paulson, about the identity of which no ambiguity exists, would become available names. This solution has been adopted by two French carcinologists : Professor Th. Monod, and the first author of the present paper.

11. The present authors hope that in the foregoing paragraphs they have given a sufficiently clear picture of the present awkward situation of the generic name *Pagurus* Fabricius. There is one more problem, however, that needs to be solved before a final action with regard to this generic name can be taken. This problem concerns the identity of *Cancer bernhardus* Linnaeus, 1758, the type species of the genera *Pagurus* Fabricius and *Eupagurus* Brandt. Linnaeus's (1758) original definition of *Cancer bernhardus* does not fit for the species which at present currently is indicated with the name *Pagurus* (or *Eupagurus*) *bernhardus* (Linnaeus). Linnaeus's description namely runs as follows :

"C[ancer]. macrourus parasiticus, chelis cordatis laevibus : sinistra majore.

*Matth. diosc.* 230.

*Aldr. exsangu.* 218

*Rond. pisc.* 1. p. 553.

*Jonst. exsangu. t.* 7. f. 6—12.

*Bellon. aquat.* 362.

*Swammerd. bibl. t.* 11. f. 1, 2.

*Gesn. aquat.* 161.

*Habitat in Oceano Europaeo, intra varias testas Concharum.*

*Chelae margine anteriore versus basin barbatae."*

12. In the species which is at present generally known as *Pagurus bernhardus* the two chelae are roughened by tubercles, and the right chela always is larger than the left. For this species the definition given by Linnaeus (1767, *Syst. Nat.* (ed. 12) 1 : 1049) for *Cancer bernhardus* fits far better : "C[ancer]. macrourus parasiticus, chelis cordatis muricatis : dextra majore." All subsequent authors, like Fabricius (1775) in the original description of the genus *Pagurus*, ignore Linnaeus's 1758 description of *Cancer bernhardus* and use the specific name *bernhardus* in the sense adopted by Linnaeus in 1767.

13. Linnaeus's (1758) definition is based either on *Diogenes pugilator* (Roux, 1829) or on *Paguristes oculatus* (Fabricius, 1775). Many of the descriptions and figures of hermit crabs given by the authors cited by Linnaeus (1758) in the original description of *Cancer bernhardus*, are not recognisable, but a few can be identified with known species. The figures given by Matthioli, Rondelet, Bellonius, Gesner, Aldrovandus, and Jonston are either so crude as to make identification impossible or show a species with the left chela larger than the right. This species, presumably *Diogenes pugilator*, is figured by Matthioli, Rondelet, Gesner, and Jonston; the figures given by the last two authors being no more than copies of that given by Rondelet. The species described and figured by Swammerdam, however, can be identified without the least doubt as being identical with the species currently known as *Pagurus* (or *Eupagurus*) *bernhardus*. *Cancer bernhardus* Linnaeus, 1758, thus is a composite species, Linnaeus having confounded under that name at least two species: *Pagurus bernhardus*, and *Diogenes pugilator*, and/or *Paguristes oculatus*. In normal circumstances it would be logical to choose as the lectotype of *Cancer bernhardus* a specimen that agrees with Linnaeus's original definition. In the present case, however, such a selection would mean that *Pagurus bernhardus* would become synonymous with either *Diogenes pugilator* or with *Paguristes oculatus*, so that the well known generic name *Pagurus* and the equally well known specific name *bernhardus* would have to be transferred to a genus and a species for which they have practically never been used. This transfer of names would cause such enormous confusion that no well-thinking carcinologist would ever attempt to introduce it. The only sensible solution is therefore to select as the lectotype of *Cancer bernhardus* the specimen figured by Swammerdam (1737, *Bibl. Naturae*: pl. 11, fig. 1), even if this specimen does not agree with Linnaeus's original definition of the species. We accordingly here select the above specimen to be the lectotype of this species.

14. Swammerdam received his material from fishermen living in the Dutch coastal village of Scheveningen near The Hague, who saved for him any curious animal that they got in their nets. It is known that around 1700 the Scheveningen fishermen went out in their flat-bottomed ships and fished in the southern North Sea (from the Dogger Bank southwards), generally staying rather close to the Dutch coast. Swammerdam's specimens therefore certainly came from the southern North Sea, a locality which we now may indicate as the restricted type locality of *Cancer bernhardus* Linnaeus, the actual type locality being "in Oceano Europaeo". We do not know what became of the specimen of *Pagurus bernhardus* after Swammerdam described and figured it. He may have discarded it or placed it in his collection. When Swammerdam died on February 17, 1680, he had the intention to sell his collection but had not yet done so (see Engel, 1938, *Bijdr. Dierk.* 27 : 320). It is not known what happened to the collection after Swammerdam's death, and we must consider his specimens as either destroyed or lost.



15. The name for the subfamily containing Genus B shows the following synonymy:—

PAGURINAE (correction by Samouelle (1819, *Entomol. useful Comp.*: 91) of PAGURII Latreille, 1802—1803, *Hist. nat. Crust. Ins.* 3: 29 (type genus *Pagurus* Fabricius, 1775). (Ortmann, 1892 (*Zool. Jb. Syst.* 6: 269, 275) was the first author to use the subfamily name PAGURINAE in the sense adopted by workers belonging to Group II.)

DIOGENINAE Ortmann, 1892, *Zool. Jb. Syst.* 6: 270, 294 (type genus: *Diogenes* Dana, 1851)

DARDANINAE Schmitt, 1926, *Bull. Amer. Mus. nat. Hist.* 53: 45 (type genus: *Dardanus* Paulson, 1875)

PAGURISTINAE Makarov, 1938, *Faune URSS* 10(3): 157 (type genus: *Paguristes* Dana, 1851, *Proc. Acad. nat. Sci. Philad.* 5: 268, 269, 271). (This name was first published in the invalid vernacular (German) form as PAGURISTINEN by Boas in 1924 (*Biol. Meddel. K. Dansk Videns. Selsk. Kjøbenhavn* 4(4): 30.)

16. Authors of Group II use the name PAGURINAE for the foregoing subfamily. Under the Rules authors belonging to Group I should use for this subfamily the name DIOGENINAE, that being the oldest available name. This name has, however, hardly been used at all in modern carcinological literature, and it is desirable that the Commission should use its Plenary Powers to direct that the name DIOGENINAE Ortmann is not to be used in preference to the name DARDANINAE Dana, notwithstanding its priority over that name. This course is necessary, partly because the general introduction of the name DIOGENINAE Ortmann at the subfamily level would do violence to established practice and partly because the genus *Diogenes* Dana is most unsuitable for adoption as the type genus of a family-group taxon, as its species present certain aberrant characters not shared by the remainder of the group.

17. The subfamily containing Genus A is called PAGURINAE by authors of Group I. By authors of Group II it is known as EUPAGURINAE Ortmann, 1892 (*Zool. Jb. Syst.* 6: 270, 296 (type genus: *Eupagurus*, Brandt, 1851). So far as is known to us, there are no junior synonyms of the name EUPAGURINAE.

## Part II. Discussion and proposals by J. Forest

18. The selection of the specimen figured by Swammerdam as the lectotype of *Cancer bernhardus* Linnaeus, the only practical way of remedying the

antinomy existing between the definitions given by Linnaeus in 1758 and in 1767, involves, under a strict observance of the Rules the attribution of the name *Pagurus* Fabricius to Genus A, in conformity with Latreille's 1810 selection of *Pagurus bernhardus* as the type species of this genus.

19. In the present case, however, such a strict application of the Rules would, it seems to me, let the confusion in the Paguridean nomenclature continue. We may assume that in the future some carcinologists will again use the name *Pagurus* for Genus B, following in this the eminent early carcinologists, who are the authors of basic monographs on the Pagurids, like Dana and especially Alcock (1905, *Cat. Indian Decap. Crust. Indian Mus.* 2(1)), whose monograph contains the most complete study of the group yet published. If, e.g., a new species of *Pagurus* is mentioned in the *Zoological Record*, we shall still wonder which genus is actually meant. A suspension of the Rules, giving the name *Pagurus* to Genus B, would cause the same inconveniences. No decision in which the generic name *Pagurus* was maintained could end the present state of confusion. The same holds true for the subfamily name PAGURINAE. This name was first used by Ortmann in 1892 (*Zool. Jb. Syst.* 6 : 270, 275). It was employed by this author for the subfamily containing genus B. In 1938 Makarov (*Faune URSS* 10(3) : 156, 169) used the same subfamily name for the other subfamily of PAGURIDAE. At present it is practically impossible to know which subfamily is meant when the name PAGURINAE is used for it.

20. Therefore I propose the complete suppression of the names *Pagurus* and PAGURINAE, which have by now lost their usefulness because of the different meaning attached to them by different carcinologists. By this action the unambiguous generic names *Eupagurus* Brandt and *Dardanus* Paulson, together with the equally unambiguous subfamily names EUPAGURINAE and DARDANINAE, become valid names. This solution has already been adopted by Professor Th. Monod (1933, *Bull. Com. Etud. Hist. Sci. Afr. occid. franç.* 13 : 25—30). I would suggest however that the name PAGURIDAE be maintained for the family since this name has continually been used by all carcinologists and no ambiguity whatsoever is attached to it. The same holds true for the names based on the generic name *Pagurus* given to those taxa of the family group that are above the family level. It seems to be of little sense to coin new names for these groups.

21. I now submit to the International Commission on Zoological Nomenclature the following proposals in which I ask for :—



## (1) the use of the Plenary Powers :—

- (a) to suppress the generic name *Pagurus* Fabricius, 1775 (type species, by selection by Latreille (1810) : *Cancer bernhardus* Linnaeus, 1758) for the purposes of the Law of Priority but not for those of the Law of Homonymy ;
- (b) to validate the family-group name PAGURIDAE (correction of PAGURII) Latreille, [1802—1803] (type genus : *Pagurus* Fabricius, 1775) for use as the name for taxa belonging to the family and higher categories within the family-group of categories, but not for taxa belonging to any category within that group below the category of family ;
- (c) to direct that the family-group name DIOGENINAE Ortman, 1892, is not to be used in preference to the name DARDANINAE Schmitt, 1926, by workers who consider that the type genera of these two nominal family-group taxa are referable to the same family-group taxon ;

(2) the insertion in the *Official List of Generic Names in Zoology* of the under-mentioned generic names :—

- (a) *Dardanus* Paulson, 1875 (gender : masculine) (type species, by monotypy : *Dardanus hellerii* Paulson, 1875) ;
- (b) *Eupagurus* Brandt, 1851 (30th Sept.) (gender : masculine) (type species, by selection by Stimpson (1858) : *Cancer bernhardus* Linnaeus, 1758) ;

(3) the insertion in the *Official Index of Rejected and Invalid Generic Names in Zoology* of the following generic names :—

- (a) *Bernhardus* Dana, 1851 (Nov.-Dec.) (a junior objective synonym of *Eupagurus* Brandt, 1851) ;
- (b) *Pagurus* Fabricius, 1775, as suppressed under the Plenary Powers under (1)(a) above ;
- (c) *Pagurus* Berthold, 1827 (a *nomen nudum*) ;

(4) a ruling that the nominal species *Cancer bernhardus* Linnaeus, 1758, be interpreted by the lectotype selected by Forest & Holthuis in the present application, namely the specimen figured by Swammerdam in 1737 as fig. 1 on pl. XI of that author's *Bybel der Natuure* ;(5) the insertion in the *Official List of Specific Names in Zoology* of the under-mentioned specific names :—

- (a) *bernhardus* Linnaeus, 1758, as published in the combination *Cancer bernhardus* and as defined by the lectotype specified in (4) above (specific name of type species of *Eupagurus* Brandt, 1851);
  - (b) *sanguinolentus* Quoy & Gaimard, 1825, as published in the combination *Pagurus sanguinolentus* ;
- (6) the insertion in the *Official List of Family-Group Names in Zoology* of the under-mentioned family-group names :—
- (a) DIOGENINAE Ortmann, 1892 (type genus : *Diogenes* Dana, 1851), the entry of this name on the *Official List* to be subject to the following endorsements :—(i) that this name is placed on the *List* for use by those workers who consider on taxonomic grounds that *Diogenes* Dana, 1851, should be placed in a family-group-taxon different from that in which *Dardanus* Paulson, 1875, is placed, and (ii) that, in accordance with the directions given under the Plenary Powers under (1)(c) above, the name DIOGENINAE Ortmann, 1892, is not to be used in preference to the name DARDANINAE Schmitt, 1926, notwithstanding its older date ;
  - (b) DARDANINAE Schmitt, 1926 (type genus : *Dardanus* Paulson, 1875), the entry of this name on the *List* to be subject to the following endorsement :—this name to be given preference, in accordance with the directions given under the Plenary Powers under (1)(c) above, over the name DIOGENINAE Ortmann, 1892, by any worker who may consider on taxonomic grounds that *Dardanus* Paulson, 1875, and *Diogenes* Dana, 1851, are referable to the same family-group taxon ;
  - (c) EUPAGURINAE Ortmann, 1892 (type genus : *Eupagurus* Brandt, 1851), as the name for taxa belonging to any category within the family-group below the category of family ;
  - (d) PAGURIDAE (correction of PAGURII) Latreille, [1802—1803] (type genus : *Pagurus* Fabricius, 1775), as the name, under the Plenary Powers under (1)(b) above, for taxa belonging to the family and higher categories within the family-group but not for taxa belonging to any category within that group below the category of family ;
- (7) the insertion in the *Official Index of Rejected and Invalid Family-Group Names in Zoology* of the under-mentioned names :—

- (a) EUPAGURIDAE (elevation of EUPAGURINAE) Ortmann, 1892 (type genus : *Eupagurus* Brandt, 1851), as the name for taxa belonging to the family and higher categories within the family-group (invalid because for taxa of the foregoing ranks a junior objective synonym of PAGURIDAE (correction of PAGURII) Latreille, [1802—1803]);
- (b) PAGURINAE (correction at subfamily level of PAGURII) Latreille, [1802—1803], as the name for taxa of all categories within the family-group below the category of family (invalid because, under *Declaration* 20, suppressed automatically as the name for such taxa consequent upon the suppression under the Plenary Powers of the generic name *Pagurus* Fabricius, 1775, the name of the type genus).

22. I should like to add by way of explanation that of the proposals now submitted that which I regard as being of the first importance is the suppression of the generic name *Pagurus* Fabricius. Accordingly, I hope that, if the Commission were to feel that it would be difficult to take this action while at the same time keeping alive the family-name PAGURIDAE (though not the family-group names of lower rank based upon the generic name *Pagurus*), the Commission will give precedence to the request for the suppression of the above generic name. In that event, I would ask the Commission, while rejecting my proposal (1)(b) (proposal for the validation of the family name PAGURIDAE), to place the family-group name EUPAGURINAE Ortmann, 1892, on the *Official List of Family-Group Names in Zoology*. Under this arrangement, the name for the family in question would become EUPAGURIDAE in view of the co-ordinate character of names given to taxa of all categories in the family-group. The adoption of this course would have the following consequential effects on the proposals which I have submitted as regards family-group names:—(i) it would be necessary to delete the qualifications proposed in (6)(c) (relating to the family-group name EUPAGURINAE); (ii) proposal (6)(d) (relating to the placing of PAGURIDAE on the *Official List*) and proposal (7)(a) (relating to the placing on the *Official Index* of EUPAGURIDAE, while retaining that name for taxa below full family rank) would need to be deleted. (The proposed deletion, as suggested in (i) above, of the qualification to the entry of EUPAGURINAE on the *Official List* would have the effect of making that name available at the family-name level instead of only at the subfamily level and lower levels as now proposed.) Finally, (iii) it would be necessary to delete the qualification at present inserted in proposal (7)(b) since in the circumstances envisaged the family-group name based upon the generic name *Pagurus* would become invalid for all purposes instead of (as now proposed) being retained at the family-name level.

## Part III. Discussion and proposals by L. B. Holthuis

23. Of the three solutions to the present problem, it is Solution I which, in my opinion, is the most acceptable. Solution III, it is true, has some attractive aspects, but a number of reasons make me believe that the other Solutions are to be preferred. These reasons are the following :—

(a) Solution III has been adhered to in the publications of only one author (Th. Monod), who rejects the generic name *Pagurus*, while until now all other carcinologists have been using this name, although in two different senses. Acceptance of Solution III would mean that every carcinologist except one would have to change the nomenclature that he has been using thus far. It seems more logical to me to legalize a solution that has been accepted by the majority of carcinologists so that the number of authors that have to change the names adopted by them, be as small as possible.

(b) The generic name *Pagurus* Fabricius is the oldest of the generic names for hermit crabs and it may be considered to be the typical name in this group. As has already been pointed out *Pagurus* is the type genus of the subfamily PAGURINAE, of the family PAGURIDAE, and of the section PAGURIDEA (the latter group containing all hermit crabs). Furthermore the name has penetrated widely in non-systematic literature and even vernacular derivations like "pagures", "pagurides", "pagurids", and "Paguriden" are found in a very large number of scientific and non-scientific publications. From the name *Pagurus* are derived a great number of names for genera of hermit crabs like *Anapagurus*, *Catapagurus*, *Cestopagurus*, *Holopagurus*, *Mixtopagurus*, *Nematopagurus*, *Orthopagurus*, *Parapagurus*, *Sympagurus*, etc. The suppression of the name *Pagurus* would therefore deprive the section PAGURIDEA of the basic name on which the nomenclature of most of its genera and higher taxa is based.

(c) I strongly doubt that the continuation of the use of the generic name *Pagurus* will do much harm. It is true that under Solution I and Solution II the name *Pagurus* will be an ambiguous name for some time, but this state of ambiguity will last only until such time as the decision on this question made by the International Commission on Zoological Nomenclature is generally accepted by zoologists. Such a period of ambiguity, however, exists in the case of every generic name when the genus so named is split up into two or more genera. When, e.g., an author finds that the species generally placed in a genus X, in his opinion actually belong in two different genera, which he then names X and Y, the name X will be an ambiguous name till the decision

of this author has been accepted by other zoologists. Such a period of instability will also occur if Solution III is decided upon by the Commission, as it will take some time before zoologists get acquainted with this decision. I do not see any reason why this period for Solution III should be shorter than for Solution I or Solution II.

(d) I believe that not too much importance should be attached to the ambiguity of the name *Pagurus*. As a generic name it practically always is used in combination with a specific name, and the latter will provide an immediate clue as to the identity of the genus so named. The combination of the generic name *Pagurus* and a specific name will show whether the author using these names belongs to Group I or to Group II. When new species of the genus *Pagurus* are described the description will provide the clue. In this respect too the continued use of the generic name *Pagurus* will not do too much harm.

24. For these reasons I do not believe that Solution III should be preferred to either of the two other Solutions. As far as the latter are concerned, I might put forward the following considerations.

25. In order to legalize Solution II it would be necessary to suspend the Rules, while Solution I is obtainable without such action. A suspension of the Rules is to be given "for the purpose of preventing confusion and of promoting a stable and universally accepted nomenclature" (Hemming, 1953, *Copenhagen Decisions zool. Nomencl.* : 23). In the present case some confusion cannot be prevented since it is already in existence. In order to attain a universally accepted nomenclature, the authors forming either Group I or Group II would have to change the names they have been adopting thus far. In my opinion, a suspension of the Rules would be justified here only if the workers of Group II were distinctly more numerous than those of Group I, so that such a suspension would cause less confusion than would the strict application of the Rules. In Part I of this application the size of Groups I and II have already been indicated jointly by the present applicants. Though I cannot give exact figures of the numbers of the carcinologists of today belonging to one or the other of the two Groups, I am of the opinion that Group I certainly is not smaller than Group II, and that it is growing gradually at the expense of that Group, mainly because it adheres to the Rules. Furthermore, the number of species of genera A and B living in the territory covered by the workers of Group I is larger, I believe, than the number in the region investigated by Group II. Alcock (1905, *Cat. Indian Decap. Crust. Indian Mus.* 2(1) : 174—184), e.g., listed 13 species of *Eupagurus* as belonging to the fauna of Europe and not less than 55 species of the same genus as occurring in North America.

26. I do not believe therefore that a suspension of the Rules would serve any useful purpose on this occasion. Accordingly, in my opinion such a suspension would not be justified in the present case. For this reason the Commission is asked to :—

- (1) place on the *Official List of Generic Names in Zoology* the under-mentioned generic names :—
  - (a) *Pagurus* Fabricius, 1775 (type species, by subsequent selection by Latreille (1810) : *Cancer bernhardus* Linnaeus, 1758) ;
  - (b) *Dardanus* Paulson, 1875 (type species, by monotypy : *Dardanus hellerii* Paulson, 1875).
  - (c) *Diogenes* Dana, 1851 (type species, by subsequent selection by Dana (1852) : *Pagurus miles* Fabricius, 1787) ;
- (2) place on the *Official Index of Rejected and Invalid Generic Names in Zoology* the under-mentioned generic names :—
  - (a) *Eupagurus* Brandt, 1851 (a junior objective synonym of *Pagurus* Fabricius, 1775) ;
  - (b) *Bernhardus* Dana, 1851 (a junior objective synonym of *Pagurus* Fabricius, 1775).
  - (c) *Pagurus* Berthold, 1827 (a *nomen nudum*) ;
- (3) rule that the nominal species *Cancer bernhardus* Linnaeus, 1758, be interpreted by the lectotype selected by Forest & Holthuis in the present application, namely the specimen figured by Swammerdam in 1737 as fig. 1 on pl. XI of that author's *Bybel der Natuure* ;
- (4) place the under-mentioned specific names on the *Official List of Specific Names in Zoology* :—
  - (a) *bernhardus* Linnaeus, 1758, as published in the combination *Cancer bernhardus* and as defined by the lectotype specified in (3) above (specific name of type species of *Pagurus* Fabricius, 1775) ;
  - (b) *miles* Fabricius, 1787, as published in the combination *Pagurus miles* (specific name of type species of *Diogenes* Dana, 1851) ;
  - (c) *sanguinolentus* Quoy & Gaimard, 1825, as published in the combination *Pagurus sanguinolentus* ;
- (5) place the under-mentioned family-group names on the *Official List of Family-Group Names in Zoology* :—
  - (a) *DIOGENINAE* Ortmann, 1892 (type genus : *Diogenes* Dana, 1851) ;
  - (b) *PAGURIDAE* (correction by Samouelle, 1819, of *PAGURII*) Latreille, [1802—1803] (type genus : *Pagurus* Fabricius, 1775) ;



(6) place the under-mentioned family-group names on the *Official Index of Rejected and Invalid Family-Group Names in Zoology* :—

- (a) EUPAGURINAE Ortmann, 1892 (type genus : *Eupagurus* Brandt, 1851) (invalid because the type genus has as its type species the same species as that which is the type species of *Pagurus* Fabricius, 1775, the type genus of the older family-group taxon PAGURIDAE (correction of PAGURII) Latreille, [1802—1803]);
- (b) PAGURII Latreille, [1802—1803] (type genus : *Pagurus* Fabricius, 1775) (an Invalid Original Spelling for PAGURIDAE) ;
- (c) PAGURISTINEN Boas, 1924 (type genus : *Paguristes* Dana, 1851) (invalid because a vernacular (German) word and not a Latin or Latinised word).